

Remarks

Claims 1-20 are pending and have been rejected. Applicant has amended claims 1 and 5 and respectfully submits that claims 1-20 are in condition for allowance.

Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1-20 have been rejected under 35 U.S.C. § 102(b) as being anticipated by *Mullin* (U.S. 3,326,827). Applicant respectfully traverses the rejection based on the claim amendment presented above and following arguments.

Independent claim 1 includes, among other things, “pigment particles reacted with an epoxy compound at an elevated temperature in the presence of a solvent for dispersing the pigments.” Similarly, independent claim 5 includes, among other things, that “particles of the pigment are reacted with an epoxy compound at an elevated temperature in the presence of a solvent to provide a surface treatment of the particles.” *Mullin* does not disclose or suggest these features.

As a preliminary matter, Applicant respectfully submits that the term “react” and variants thereof does not encompass “mere physical contact”. This observation is supported by both the ordinary meaning and the specification. To one of ordinary skill in the art of pigment composition, a reaction between pigment particles and another compound, such as an epoxy compound, is more than mere physical contact between the two. Further more, in Example (1) section of the application, for example, the pigment particles and epoxy compound are said to be mixed with a solvent to form a slurry, which is *then* heated to undergo “reaction”. Because the pigment particles and epoxy compound in a slurry are already in physical contact with each other, the specification makes it clear that the “reaction” accomplished in the heating step is not mere physical contact.

As demonstrated by the example preparation process and the advantageous effect attributable thereto in the specification (see Examples 1-6 and Comparative Examples 1-5), with the required heat treatment of the pigment at elevated temperatures, e.g., the reflux temperature of the solvent (e.g., 90 °C), the resultant pigment includes a reaction product with an epoxy compound. The reacted pigments exhibit a lower viscosity value and smaller particle size (see Tables 1 and 2), as well as better thermostability and compatibility (see Table 3). In contrast, *Mullen* merely discloses TiO₂ particles physically coated a plasticizer for dispersing TiO₂, a

pigment, in the polyvinyl resin for the production of a PVC panel. As set forth in the *Mullin* patent, it is intended to have the dispersity of TiO₂, a good opacifier, in the polyvinyl resin greatly improved so as to manufacture a decorative PVC sheet with excellent quality (see lines 38-41, column 1). For this purpose, rather than blending TiO₂ directly into the polyvinyl resin with a commercially available plasticizer, *Mullin* proposes to physically coat TiO₂ with an epoxidized vegetable oil, e.g., polyepoxide linseed oil, epoxidized soybean oil, (I-b, II-b, see Examples) prior to blending with the polyvinyl resin to capitalize on the embedding function thereof to thereby enhance dispersibility of TiO₂ in the polyvinyl resin. Nowhere in *Mullin* patent is there disclosure or suggestion that the pigment particle is treated with epoxy compound under an elevated temperature to undergo a reaction between the pigment's surface and epoxidized vegetable oil.

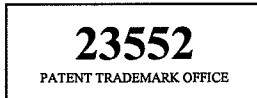
For at least these reasons, Applicant respectfully requests the withdrawal of the rejection of claims 1 and 5, as well as their dependent claims 2-4, 7-8 and 14 respectively, under 35 U.S.C. § 102(b) based on *Mullin*.

Independent method claim 9 includes, among other things, "causing the pigment particles to react with the epoxy compound at an elevated temperature wherein a discrete powder form of the surface treated pigment particles can be obtained by virtue of drying of the solvent." For at least the same reasons stated above, *Mullin* fails to disclose or suggest this feature. Applicant thus respectfully requests the withdrawal of the rejection of claim 9, as well as its dependent claims 10-13 and 15 under 35 U.S.C. § 102(b) based on *Mullin*.

Independent claim 16 includes, among other things, the feature that "the epoxy compound forms a discrete layer on the pigment surface." *Mullin* fails to disclose or suggest this feature. For at least this reason, Applicant respectfully requests the withdrawal of the rejection of claim 16, as well as its dependent claims 17-20 under 35 U.S.C. § 102(b) based on *Mullin*.

Summary

In view of the above amendments and remarks, Applicants respectfully request a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.



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Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

A handwritten signature in black ink, appearing to read "Tong Wu", written over a horizontal line.

Tong Wu
Reg. No. 43,361